

CLAIMS

We claim:

- 1 1. A method for selectively handling data processing requests in a computer
2 communications network comprising the steps of:
 - 3 identifying at least one type of dynamic data processing which can be performed
4 in an edge server;
 - 5 detecting a request for dynamic data processing in network distributable markup;
 - 6 determining whether said edge server can perform said requested dynamic data
7 processing based upon said identified types of dynamic data processing which can be
8 performed in said edge server; and,
 - 9 deferring processing of said request to an edge server if it is determined that said
10 edge server can perform said requested dynamic data processing.
- 1 2. The method of claim 1, wherein said deferring step comprises the steps of:
 - 2 determining whether it is preferable to defer processing of said request to an
3 edge server; and,
 - 4 deferring processing of said request to an edge server if it is determined that it is
5 preferable to defer processing of said request to said edge server.
- 1 3. The method of claim 1, further comprising the steps of:
 - 2 if it is determined that said dynamic data processing can be performed in said
3 edge server, generating markup which contains said request for dynamic data

4 processing, encapsulating said markup in a response, and, forwarding said response to
5 said edge server, wherein said edge server can perform said deferred processing.

1 4. The method of claim 3, further comprising the steps of:

2 if it is determined that said dynamic data processing cannot be performed in said
3 edge server, performing said data processing, said data processing producing a result,
4 generating markup which contains said result, encapsulating said markup in a
5 response, and, forwarding said response to said edge server, wherein said edge server
6 can forward said response to requesting user.

1 5. A method for selectively handling data processing requests in a computer
2 communications network comprising the steps of:

3 configuring a tag handler to perform dynamic data processing;
4 further configuring said tag handler to identify whether a specified edge server
5 can perform said dynamic data processing;

6 establishing a tag definition corresponding to said tag handler; and,
7 embedding references to said tag definition and said tag handler in network
8 distributable markup,

9 whereby an origin server processing said markup can locate said tag handler
10 based upon said tag definition and can determine from said tag handler whether to
11 defer processing of a data processing request to said specified edge server or whether
12 to process said request locally in said origin server.

13 6. A system for selectively processing a request for dynamic data processing in a
14 computer communications network comprising:
15 a tag handler library comprising a plurality of tag handlers configured to perform
16 dynamic data processing;
17 a tag definition file comprising a plurality of tag definitions, each said tag
18 definition associating a tag handler with a particular markup language tag;
19 an application processor configured to process markup and to invoke tag
20 handlers corresponding to particular markup language tags detected in said markup as
21 specified by tag definitions in said tag definition file; and,
22 deferred processing logic configured to modify a request header to specify which
23 types of dynamic data processing said system can process, said deferred processing
24 logic being further configured to pre-process markup for processing in said application
25 processor.

1 7. The system of claim 6, wherein said tag handler comprises a Java class.

1 8. The system of claim 6, wherein said markup is a Java Server Page (JSP) and
2 said markup language tag is a customized JSP tag.

1 9. A method for selectively handling data processing requests in a computer
2 communications network comprising the steps of:

3 receiving in an edge server an HTTP request for a Java Server Page (JSP), said
4 HTTP request comprising an HTTP request header;
5 modifying said HTTP request header to indicate whether said edge server can
6 process JSP program fragments having particular markup tags;
7 forwarding said HTTP request comprising said modified HTTP request header to
8 an origin server, said origin server processing said HTTP request by serving said
9 requested JSP, but deferring processing of any JSP program fragments in said JSP
10 having said particular markup tags, and returning said requested JSP to said edge
11 server; and,
12 processing said deferred JSP program fragments in said edge server.

1 10. The method of claim 9, wherein said modifying step comprises:
2 determining whether said edge server is configured to process JSP program
3 fragments having particular markup tags;
4 if it is determined that said edge server is not configured to process JSP program
5 fragments having particular markup tags, configuring said edge server with selected
6 markup tag handlers so that said edge server can process said JSP program
7 fragments; and,
8 modifying said HTTP request header to indicate that said edge server can
9 process said JSP program fragments having said particular markup tags;

1 11. A machine readable storage having stored thereon a computer program for
2 selectively handling data processing requests in a computer communications network,
3 said computer program having a plurality of code sections executable by a machine for
4 causing the machine to perform the steps of:

5 identifying at least one type of dynamic data processing which can be performed
6 in an edge server;

7 detecting a request for dynamic data processing in network distributable markup;

8 determining whether said edge server can perform said requested dynamic data
9 processing based upon said identified types of dynamic data processing which can be
10 performed in said edge server; and,

11 deferring processing of said request to an edge server if it is determined that said
12 edge server can perform said requested dynamic data processing.

1 12. The machine readable storage of claim 11, wherein said deferring step
2 comprises the steps of:

3 determining whether it is preferable to defer processing of said request to an
4 edge server; and,

5 deferring processing of said request to an edge server if it is determined that it is
6 preferable to defer processing of said request to said edge server.

1 13. The machine readable storage of claim 11, further comprising the steps of:
2 if it is determined that said dynamic data processing can be performed in said
3 edge server, generating markup which contains said request for dynamic data
4 processing, encapsulating said markup in a response, and, forwarding said response to
5 said edge server, wherein said edge server can perform said deferred processing.

1 14. The machine readable storage of claim 13, further comprising the steps of:
2 if it is determined that said dynamic data processing cannot be performed in said
3 edge server, performing said data processing, said data processing producing a result,
4 generating markup which contains said result, encapsulating said markup in a
5 response, and, forwarding said response to said edge server, wherein said edge server
6 can forward said response to requesting user.

1 15. A machine readable storage storing thereon a computer program for selectively
2 handling data processing requests in a computer communications network, said
3 computer program having a plurality of code sections executable by a machine for
4 causing the machine to perform the steps of:
5 receiving in an edge server an HTTP request for a Java Server Page (JSP), said
6 HTTP request comprising an HTTP request header;
7 modifying said HTTP request header to indicate whether said edge server can
8 process JSP program fragments having particular markup tags;

9 forwarding said HTTP request comprising said modified HTTP request header to
10 an origin server, said origin server processing said HTTP request by serving said
11 requested JSP, but deferring processing of any JSP program fragments in said JSP
12 having said particular markup tags, and returning said requested JSP to said edge
13 server; and,
14 processing said deferred JSP program fragments in said edge server.

1 16. The machine readable storage of claim 15, wherein said modifying step
2 comprises:

3 determining whether said edge server is configured to process JSP program
4 fragments having particular markup tags;
5 if it is determined that said edge server is not configured to process JSP program
6 fragments having particular markup tags, configuring said edge server with selected
7 markup tag handlers so that said edge server can process said JSP program
8 fragments; and,
9 modifying said HTTP request header to indicate that said edge server can
10 process said JSP program fragments having said particular markup tags;